

HISTORICAL NOTES

TYPIFICATION OF THE HAWAIIAN PLANTS DESCRIBED BY ASA GRAY FROM THE WILKES EXPEDITION COLLECTIONS, AND AN ENUMERATION OF THE OTHER HAWAIIAN COLLECTIONS

HAWAIIAN PLANT STUDIES 54

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Asa Gray was requested by Capt. Charles Wilkes to report on the foreign plant collections gathered on the United States Exploring Expedition on their world tour from 1838 to 1842, mostly by Charles Pickering and W. D. Brackenridge. In 1854 Gray published (Gray, 1854) a first volume on the botany, and for this the atlas with the plates followed in 1857. Dissatisfied with the treatment given him by Commander Wilkes, who directed the publication of the scientific volumes, Gray withheld the manuscript of his second volume. From it he extracted the descriptions of the new species, and published them (1852–1862) in the Proceedings of the American Academy of Arts and Sciences, of which he was an editor. His original manuscript, which is more extensive than the material published, is in the library of GH at Harvard University.

The type method was not then in use. When Gray described a new species or variety from a single specimen, this specimen, in one herbarium (usually US), automatically becomes the holotype. These holotypes are enumerated here. In the few instances when there are more than one sheet of the new taxon in US, each is here listed by its sheet number.

These publications were important in making known many species from the Pacific islands, including ones from Hawaii. The first, and usually the best set of these collections was returned by Gray, and deposited in Washington, and now is in US. The second set, nearly complete, but in many parts fragmentary, was kept by Gray, and now is in GH. Other duplicates, few in number, are in other herbaria, NY, P, etc.

When Gray based a new taxon on two or more collections, often from different localities, it is necessary now to select a lectotype (International Code of Botanical Nomenclature, 1978, Art. 7.5.)

Several monographers of Hawaiian plants have already designated the lectotypes within their genera. These plants are here listed, with the references to their places of publication. For the remaining ones, lectotypes are here designated. In preparation for these choices, the Wilkes Expedition collections in US and in GH were examined.

Enumerated herein also are the Hawaiian records of older species included by Gray in his reports. The arrangement of the plants here followed is the same as that in Gray's book and articles; numbers at the left are page numbers. Insertions by the author are in brackets.

Wilkes Expedition Botany, Vol. 15, 1854
(Gray, 1854–1857.)

RANUNCULACEAE

10. *Ranunculus Hawaiiensis* Gray. "Hawaii, also collected by Douglas." (Lectotype: "Hawaii, water runs," US). (Isotype: Wilkes Expedition, GH) marked "type" by L. Benson, but he did not publish his choice.
11. *Ranunculus Mauiensis* Gray. "Mountains of West Maui." (Holotype: US).
11. var. β "mountains, Kauai." This taxon has remained unnamed.

MENISPERMACEAE

39. *Nephroica Ferrandiana* (Gaud.) Miers [= *Cocculus Ferrandianus* Gaud.], "Oahu, Kaala Mountains [= Waianae Mts.], behind Honolulu; Hawaii, District of Puna; and Waimea, Hawaii; Kauai, also in the mountains."

CRUCIFERAE

50. *Cardamine hirsuta* L., "Hawaii, in the district of Waimea, &c."
63. *Lepidium Owahiense* Cham & Schlecht. [= *o-waihiense*], "coast of Oahu, and Hawaii."

CAPPARIDACEAE

65. *Cleome Sandwicensis* Gray, "Oahu, on the coast near Honolulu. Also gathered by Lay and Collie, Barclay, and

Meyen." Not now in either US or GH. The collection from "hills of Woahu [= Oahu], July 1837, Barclay" (Lectotype: BM).

VIOLACEAE

85. *Viola Kauaensis* Gray, "On the mountains of Kauai, with *Drosera longifolia*" (Holotype: US).
 86. *Viola Chamissoniana* Ging., "Oahu, on the Kaala Mountains, and in the vicinity of Wailuka [= Wailuku]."
 93. *Isodendrion pyrifolium* Gray, "Oahu, wooded portion of the Kaala Mountains" (Holotype: US; isotype: GH).
 95. *Isodendrion longifolium* Gray, "Kaala Mountains, Oahu" (Holotype: US; isotype: GH). See St. John, *Pacif. Sci.* 6: 245, 1952.
 96. *Isodendrion laurifolium* Gray, Oahu, Kaala Mountains, "with the preceding species" (Holotype: US; isotype: GH).

DROSERACEAE

100. *Drosera longifolia* L., Kauai, mountains, "from a marsh on the table land."

CARYOPHYLLACEAE

109. *Silene struthioloides* Gray, "Hawaii, Mouna [= Mauna] Loa and Mouna Kea, in the region of *Edwardsia*; near the crater of Lua Pele" (Lectotype: US); "also in the district of Waimea." Vars. α and β : "The two forms apparently grow in the same stations."
 111. *Silene lanceolata* Gray. "Kauai, mountains" (Lectotype: US); "also on Maui" [a sterile specimen]. Sherff (*Amer. J. Bot.* 33: 501, 1946) discussed these specimens, but did not designate a lectotype.
 133. *Schiedea Hookeri* Gray, "Sandwich Islands, Menzies" (Holotype: K); it is listed by Sherff (*Brittonia* 5: 329, 1945).
 135. *Schiedea spergulina* Gray, "On the mountains of Kauai" (Holotype: US; isotype: P). It is listed by Sherff (*Brittonia* 5: 327, 1945).
 137. *Schiedea Nuttallii* Hook., "Oahu, on rocks near Honolulu; where it was also collected by Nuttall; and recently by B.

Seemann on the cruise of the Herald; also in the mountains of the west side of Maui?" [this specimen sterile].

138. *Schiedea diffusa* Gray, "Hawaii, in the forests of Mouna [= Mauna] Kea, and Mouna Loa; also on west side of the island of Maui" (Lectotype: US), designated by Sherff (*Brittonia* 5: 315, 1945). (Isolectotype: GH).

PORTULACACEAE

140. *Portulaca villosa* Cham., "Oahu, on Diamond Hill [= Diamond Head], and on the plains near Ewa."
 141. *Portulaca sclerocarpa* Gray, "Hawaii, district of Waimea" (Lectotype: US); "also (?) on sand hills, Maui."

MALVACEAE

161. *Sida fallax* Walp., "Oahu; on Diamond Hill, &c., near Honolulu. Also gathered on Oahu by Lay and Collie, Nuttall, Guadichaud, &c." Gray also included an unnamed var β .
 162. *Sida Diellii* Gray, "Hawaii, Port Byron [= Hilo], Rev. J. Diell" (Lectotype: US); "on the coast southwest of the Crater Lua Pele [= Kilauea], and Port Byron [= Hilo], Rev. J. Diell."
 163. *Sida sertum* Nutt. ex Gray, "Oahu, on the mountains behind Honolulu" (Lectotype: US). "(Also gathered by Lay and Collie, Nuttall, Diell)."
 164. *Sida Meyeniana* Walp., "Oahu, near Honolulu; also gathered by Lay and Collie, Macrae, Meyen, Gaudichaud, Barclay, &c."
 168. *Abutilon incanum* Don, "Oahu, on Diamond Hill; likewise on the coast near Honolulu. Also gathered by Chamisso, Macrae, and Nuttall."
 174. *Hibiscus Youngianus* Gaud., "Oahu, in the marshes near Honolulu."
 175. *Hibiscus Brackenridgei* Gray, "Maui, on the mountains in the west division." Lectotype designated by Roe (*Pacif. Sci.* 15: 9, 1961).
 176. *Hibiscus Arnottianus* Gray, "Oahu, on the Kaala Mountains behind Honolulu" (Lectotype: US). "where it was also gathered by Macrae, Lay and Collie, Diell, Barclay, &c. (Byron's Bay [Hilo Bay], Hawaii, Macrae, Diell)." Roe

(Pacif. Sci. 15: 26–30, 1961) considered the white-flowered plant typical, but did not definitely designate a lectotype.

178. *Paritium tiliaceum* A. Juss. [= *Hibiscus tiliaceus* L.], “Sandwich Islands.”

STERCULIACEAE

189. *Waltheria americana* L., [= *W. indica* L.], “Hawaii, and Oahu, on the coast.”
190. *Waltheria pyrolaefolia* Gray [= *W. indica* L.], “Maui, sand hills near Wailuku.” (Holotype: US; isotype: GH). This taxon was typified, and reduced to synonymy by St. John (Phytologia 33: 92, 1976).

ELAEOCARPACEAE

205. *Elaeocarpus bifidus* H. & A., “Oahu, Kaala Mountains, behind Honolulu; Also by Macrae, Lay and Collie, Nuttall, &c.”

THEACEAE

209. *Eurya ? sandwicensis* Gray, “Oahu, on the mountains behind town of Honolulu, 1840” [Wm. Rich] (Lectotype: GH; isolectotype: NY); “Hawaii, in forests on the side of Mouna Kea.” The specimen at US lacks locality data. In his monograph, Kobuski (Journ. Arn. Arb. 16: 349, 1935) listed the Oahu collection by Rich in GH and NY as the type. It needed a lectotype, and this designation cannot be in two places. The Gray Herbarium sheet is here chosen as the lectotype.

PITTOSPORACEAE

229. *Pittosporum glabrum* H. & A., “Oahu, on the Kaala Mountains, and behind Honolulu.”
231. *Pittosporum terminalioides* Planch. ex Gray, “Hawaii, Mouna Loa, at 7,000 feet elevation; on the coast S. E. of the crater of Lua Pele [= Kilauea] and Puna” (Lectotype: US); “Oahu.” This taxon was discussed by Sherff (Field Mus. Nat. Hist., Bot Ser. 22: 514–517, 1942) but he failed to choose a lectotype. Gray also had three unnamed varieties.

232. *Pittosporum confertiflorum* Gray, "at the base of the crater Haleakala, east division of Maui" (Holotype: US; isotype: GH). Listed by Sherff (Field Mus. Nat. Hist. Bot. Ser. 22: 554, 1942).

SAPINDACEAE

260. *Dodonaea viscosa* L., "Sandwich Islands; several different forms. On the coast of Hawaii and on the mountains behind Honolulu, Oahu collected; at the latter locality the [probably abnormal] form with elongated styles, some of them 5 or 6 lines in length! Similar specimens were gathered at Oahu by Gaudichaud, in the Voyage of the Bonite."
261. *Dodonaea spathulata* Sm., "Hawaii, on the mountains near the Crater Lua Pele [= Kilauea], and on Mouna Loa, at the elevation of 8,000 feet. Mountains of Maui, in the eastern side, (a narrow-leaved variety)."
261. *Dodonaea eriocarpa* Sm., "Hawaii, District of Waimea."

RHAMNACEAE

283. *Gouania vitifolia* Gray, "Oahu, on dry hills in the District of Waianai [= Waianae]." Holotype indicated by St. John (Pacif. Sci. 23: 513, 1969).
284. *Gouania ? orbicularis* Walp. [= *G. Meyenii* Steud.], "Oahu, in dry and rocky situations near Waianai."

CELASTRACEAE

291. *Perrottetia sandwicensis* Gray, "Oahu, on the mountains behind Honolulu" (Lectotype: US); "also Hawaii, along the margin of forests." The sheets in US and GH bear only the locality "Sandwich Islands." According to a note on the ticket of Gaudichaud's specimen, this shrub is called "Oraye" or "Olaye" by the Hawaiians.

AQUIFOLIACEAE

296. *Byronia sandwicensis* Endl. [= *Ilex anomala* H. & A.], "Oahu, Kaala Mountains; Hawaii, forests on Mouna Kea; and near the Crater of Lua Pele [= Kilauea]. Also gathered by Macrae, Lay and Collie, &c."

GERANIACEAE

311. *Geranium multiflorum* Gray, "Hawaii, Maui, and Kauai. Hawaii, specimen a single branch" (Holotype: US).
312. *Geranium cuneatum* Hook., var. α *Menziesii* Gray, Hawaii, Aleala, a small form."
312. var. β *hypoleucum* Gray, "Hawaii, Mouna Loa, a common shrub from the crater of Lua Pele [= Kilauea] to the elevation of 8,000 feet" (Lectotype: US); "mountains of Maui, a very small form, without flowers."
312. var. γ *hololeucum* Gray, "Hawaii, Mouna Kea" (Lectotype: US), "also Mouna Loa, abundant through the region of *Edwardsia*, E. part of Maui on banks of the crater Haleakala."
314. *Geranium ovatifolium* Gray [= *G. multiflorum* Gray, var. *ovatifolium* (Gray) Fosb.], "Maui, East division, on the north bank of the crater Haleakala" (Lectotype: GH), selected by Fosberg, (Bishop Mus., Occas. Papers 16(15): 340, 1942). The specimen so labeled in US is the var. *canum* Hbd.
315. *Geranium arboreum* Gray, "Maui, Eastern part near the upper border of the forest, at about the elevation of 6,000 feet" (Holotype: US).

OXALIDACEAE

320. *Oxalis corniculata* L. "Oahu, and Hawaii."
321. *Oxalis Martiana* Zucc., "Hawaii, Hilo." The specimen was marked by Brackenridge as not indigenous.

ZYGOPHYLLACEAE

325. *Tribulus cistoides* L., "Oahu, near Honolulu, doubtless introduced from South America." It is now considered indigenous.

RUTACEAE

340. *Pelea clusiaefolia* Gray, "Oahu, mountains behind Hololulu" (Lectotype: US). The first collection, (USEE, Oahu) was cited by Stone (Phanerog. Monogr. 3: 138, 1969) and listed as the type, thus effectively choosing it as the lectotype. Oahu, "where it was also gathered by Macrae, Lay and Collie, Gaudichaud, &c., and this was also *Clusia sessilis*

sensu H. & A., Beechey Voyage, non Forst. Hawaii, District of Puna, and on the margin of the Bullock Plain, Mouna Kea" [US; this latter specimen was made the holotype of *P. Pickeringii* St. John (Lloydia 7: 266, 1944)]. There were also two unnamed variations, from Kaala, and Mouna Kea.

343. *Pelea auriculaefolia* Gray [= *Pelea clusiaefolia* Gray, var. *auriculaefolia* (Gray) Stone, (Phanerog. Monogr. 3: 155, 1969)], "Hawaii, Mouna Kea, forests on flank of," (US). The holotype was listed by Stone (Monogr. Phanerog. 3: 156, 1969).
343. *Pelea oblongifolia* Gray, "Hawaii, in the district of Puna at an elevation of 800 or 1,000 feet near the Lua Pele Crater" (Lectotype: US); "also found in the margins of Bullock Plains, Mouna Kea, Kauai? (foliage only), Mountains behind Honolulu." Stone (Monogr. Phanerog. 3: 81, 1969) chose the Lua Pele [= Kilauea] collection as the type, thus unintentionally, but effectively, making it the lectotype. The Bullock Plains specimen is sterile.
344. *Pelea rotundifolia* Gray. "Oahu, mountains behind Honolulu" (Holotype: US).
345. *Pelea Sandwicensis* (H. & A.) Gray, "Oahu, mountains behind Honolulu; Maui; Oahu, where it was also gathered by Gaudichaud, Macrae; Oahu, Lay & Collie" (Holotype: K).
346. *Pelea volcanica* Gray, "Hawaii, Mouna Kea, in forests near Bullock Plains, etc." (Holotype: US).
350. *Melicope cinerea* Gray [= *Pelea cinerea* (Gray) Hbd., Fl. Haw. Is. 68, 1888], "Oahu, Kaala Mountains, in the district of Waianae, in a ravine" (Holotype: US), listed by Stone (Phanerog. Monogr. 3: 51, 1969).
351. *Melicope barbigera* Gray [= *Pelea barbigera* (Gray) Hbd., Fl. Haw. Is. 70, 1888], "Kauai, on the mountains" (Holotype: US).
352. *Melicope spathulata* Gray [= *Platydesma spathulata* (Gray) Stone, (Journ. Arn. Arb. 43: 416, 1962)], "Kauai, on the mountains" (Holotype: US).
353. *Melicope elliptica* Gray [= *Pelea elliptica* (Gray) Hbd., Fl. Haw. Is. 69, 1888], "Oahu, Kaala Mts., district of Waianae" (Holotype: US).
354. *Melicope grandifolia* Gray [= *Platydesma spathulata* (Gray) Stone, Madrono 16: 165, 1962], "Hawaii, in the forests of Mouna Kea" (Holotype: US).

354. *Zanthoxylum Kauaense* Gray, "Kauai, on the mountains" (Holotype: US).

ANACARDIACEAE

369. *Rhus Sandwicensis* Gray, "Oahu, in the mountains behind Honolulu (where it was collected by the Rev. J. Diehl)" (Lectotype: US), "and in the forests near Hilo, Hawaii, (Byron's Bay [= Hilo], Hawaii), Macrae; Oahu, Gaudichaud."

LEGUMINOSAE

403. *Indigofera anil* L., "Oahu, on the hills behind Honolulu." This taxon is probably *I. suffruticosa* Mill.
407. *Tephrosia piscatoria* Pers. [= *T. purpurea* (L.) Pers.]. "Sandwich Islands."
408. *Agati grandiflora* Pers. [= *Sesbania grandiflora* (L.) Poir.], "Oahu, cultivated, but not naturalized."
409. *Agati tomentosa* (H. & A.) Gray [= *Sesbania tomentosa* H. & A., Bot. Beechey Voy. 286, 1838], "Oahu, District of Waianae; Hawaii, coast east of Lua Pele [= Kilauea]. Also collected, principally on Oahu, by Lay and Collie, Douglas, Gaudichaud, Nuttall, &c." The holotype was published as from Acapulco, Mexico, Lay & Collie (K). This was certainly erroneous, as the species occurs only in the Hawaiian Islands.
420. *Vicia Menziesii* Spreng., "Hawaii, in forests of Mouna Kea; also by Macrae; it was discovered by Menzies at the upper edge of the forest on Mouna Loa."
433. *Desmodium Sandwicense* E. Meyer [= *D. uncinatum* (Jacq.) DC., an introduced weed], "Oahu, on the hills behind Honolulu; Also gathered by Seemann."
439. *Dioclea violacea* Mart., "Hawaii, on the coast near Hilo; also Kauai; probably introduced, as it is a native of Brazil." The Hawaiian plant is now classed as *D. Wilsonii* Standl.
441. *Canavalia galeata* Gaud., "Oahu, near the coast at Waianae; also on Kauai." [The Kauai plant is probably *C. kauaiensis* Sauer].
442. *Mucuna gigantea* DC., "Hawaii, district of Puna, at a watering place near Kaimo. Introduced?"

443. *Mucuna urens* DC., "Hawaii, district of Waimea, near the coast, probably introduced."
444. *Erythrina monosperma* Gaud. (non Lam.) [= *E. sandwicensis* Deg., Fl. Haw. 169c: 12/5/32], "Oahu, in the Kaala Mountains, district of Waianae." The holotype is "In insulis Sandwicensibus, (Alt. 350-400 hex.), Gaudichaud (P)."
446. *Strongylodon ruber* Vogel, "Oahu, on the Kaala Mountains, behind Honolulu; Hawaii, in forest on the side of Mouna Loa. (Also gathered by Chamisso, Macrae, Diehl, Barclay, Nuttall, &c.)"
449. *Phaseolus rostratus* Wallr. [= *Phaseolus adenanthus* G. F. W. Mey.], "Oahu, on Diamond Hill [= Diamond Head], probably introduced."
450. *Vigna Oahuensis* Vogel, "Oahu, on the Kaala Mountains, where it was also collected by Chamisso, Douglas, &c.; Kauai, Maui."
451. *Vigna Sandwicensis* Gray, "Hawaii, on Mouna Loa six miles from the crater of Lua Pele [= Kilauea]" (Lectotype: US); "Kauai, on the mountains; Maui, on the mountains in the western division of the island."
452. *Vigna lutea* (Sw.) Gray [= *V. marina* (Burm.) Merr.], "Oahu, on the shores; Maui, on the mountains of the western part."
453. *Lablab vulgaris* Savi [= *Lablab purpureus* (L.) Sweet], "Sandwich Islands, introduced and partially naturalized."
453. *Cajanus indicus* Spreng. [= *C. Cajan* (L.) Millsp.], "Sandwich Islands, cultivated, introduced and partially naturalized."
459. *Edwardsia chrysophylla* Salisb. [= *Sophora chrysophylla* (Salisb.) Seem., in Fl. Vit. 66, 1865], "Hawaii, Mouna Kea, occupying a zone reaching to an elevation of 11,000 feet; and Mouna Loa, above the Crater Lua Pele [= Kilauea]; also on the mountains of Kauai, and east Maui, on the banks of the crater of Haleakala."
461. *Guilandina Bonduc* Ait. [= *Caesalpinia Bonduc* (L.) Roxb.], "Sandwich Islands." There is also an unnamed var. β .
463. *Cassia Gaudichaudii* H. & A., "Oahu, mountains behind Honolulu; also gathered by Gaudichaud, Lay & Collie, Nuttall, &c."
480. *Acacia Koa* Gray, "Oahu, mountains behind Honolulu" (Lectotype: K, chosen by St. John (Pacif. Sci. 33: 358, 1979);

“Hawaii, side of Mouna Loa; and Mouna Kea” Isolectotypes: GH, US). In US there are two sheets labeled only “Sandwich Islands”. One sheet (no. 62,797) bears a stem, phyllodia, and flowers; the other (No. 62,798) bears a stem, phyllodia, and one pod. Pedley (Queensland Herbarium Contrib. 18: 7, 1975) cited as syntypes, “Oahu, on the mountains behind Honolulu” (Isotype: K), and “on the sides of Mouna Loa and Mouna Kea” (Syntypes: K). This treatment is not satisfactory typification. Since the species was based on several collections, one must be made the lectotype. Because it has island data, the Oahu collection (K) was chosen as the lectotype.

ROSACEAE

498. *Acaena exigua* Gray, “Kauai, on the table-land in the mountains, in a marsh” (Holotype: US).
500. *Fragaria Chilensis* Ehr. [= *F. chiloensis* (L.) Duch.], “Hawaii, in moist places on the edges of the crater Lua Pele [= Kilauea]; on Mouna Kea; and in the district of Waimea, specimens were gathered in the bullock pit in which the unfortunate Douglas lost his life. Also on the mountains of Maui.”
504. *Rubus Hawaiiensis* Gray, “Hawaii, in the forest and the Bullock Plains on Mouna Loa” (Lectotype: GH). “Mouna Kea, where it was discovered by Menzies.” It is not present in US which has only var. β , a sheet without island data.
505. *Rubus Macraei* Gray, “Hawaii, Mouna Kea” (Lectotype: US, sheet 42,449), “where it was first collected by Mr. Macrae; east Maui, on the banks of crater Haleakala.”
507. *Osteomeles anthyllidifolia* (Sm.) Lindl., “Oahu, on the plains near Ewa, and the coast near Pearl River; Hawaii, in the district of Waimea, and on Mouna Loa. Found by all collectors since the islands were first botanized by Nelson, in Cook’s last voyage.”

MYRTACEAE

510. *Eugenia malaccensis* L., “Sandwich Islands, cultivated and introduced, Pickering.”

519. *Eugenia Sandwicensis* Gray, "Oahu, on the mountains behind Honolulu both forms" (Lectotype: US, chosen by K. A. Wilson, *Pacif. Sci.* 11: 168, 1957). Degener (*Fl. Haw.* 273, 6/15/62) almost typifies it, by listing this same specimen as the type locality, but he does not select it as a lectotype, and does not mention the herbarium in which it is placed. On Oahu: "also gathered by Gaudichaud, Macrae, &c.; Kauai; foliage only." Gray also had an unnamed var. β .
550. *Psidium guajava* L., "Sandwich Islands, introduced."
560. *Metrosideros lutea* Gray, "Hawaii, vicinity of Hilo." This single sheet (US, no. 47,897) is the holotype. The synonyms are *Nani(a) lutea* (Gray) Heller, (*Minn. Bot. Stud.* 1: 867, 1897) and *M. polymorpha* Gaud. var. ϵ Hbd. (*Fl. Haw. Is.* 126, 1888). This species was not included in recent general studies of the genus. It has not been critically studied.
561. *Metrosideros rugosa* Gray, "Oahu, on the mountains behind Honolulu" (Holotype: GH). Added in pencil on the sheet is "Eastern end of Oahu, heights of Niu and Wailupe. Also gathered by Guadichaud on the Bonite Voyage."
562. *Metrosideros polymorpha* Gaud., "Oahu, in the mountains behind Honolulu. Gathered by all collectors from Nelson, in Cook's third voyage, and Menzies, to the present time." Gray also had five unnamed varieties.
564. *Metrosideros macropus* H. & A., "Oahu, on the mountains behind Honolulu. Also gathered by Macrae, Lay & Collie, Gaudichaud, Seemann."

LYTHRACEAE

606. *Lythrum maritimum* HBK., "Oahu, on the coast near Honolulu; Hawaii, in the district of Waimea."

ONAGRACEAE

619. *Jussiaea octofila* DC. [= *Ludwigia octovalvis* (Jacq.) Raven], "Oahu, fide Walpers." "A glabrous variety likewise occurs in the Sandwich Islands."

GUNNERACEAE

629. *Gunnera petaloidea* Gaud., "West Maui, on face of high mural precipices."

629. var. *kauaense* Gray [= *G. kauaiensis* Rock in Forbes, Bishop Mus., Occas. Papers 9(5): 3-4, pl. 1, 1930], "Kauai" (Holotype: US).

CARICACEAE

640. *Carica Papaya* L., "Sandwich Islands, cultivated, where the fruit of the *Papau* is a favorite esculent."

CUCURBITACEAE

650. *Sicyos pachycarpus* H. & A., "Oahu, Kaala Mts., district of Waianae, (also found by Lay and Collie, Gaudichaud, &c.). Maui, on the mountains of western part of that island."
 651. *Sicyos macrophyllus* Gray, "Hawaii, in the forest of Mouna Kea, towards their upper margin" (Holotype: US).
 653. *Sicyos cucumerinus* Gray, "Hawaii, Mouna Kea, upper part of the forests" (Holotype: US). Gray also had two unnamed varieties.

SAXIFRAGACEAE

683. *Broussaisia arguta* Gaud., "Oahu, common on the mountains behind Honolulu."
 685. *Broussaisia pellucida* Gaud. [= *B. arguta* Gaud., var. *pellucida* (Gaud.) Fosb., Bishop Mus., Occas. Papers 15(4): 59, 1939].

UMBELLIFERAE

705. *Sanicula Sandwicensis* Gray, "East Maui, on the mountains; Hawaii: on Mouna Loa, at the elevation of 8,000 feet" (Lectotype (St. John, in press): US).

ARALIACEAE

719. *Hedera Gaudichaudi* DC. [= *Cheirodendron trigynum* (Gaud.) Heller], "Hawaii, in forests at the base of Mouna Loa and Mouna Kea; Oahu, on Kaala Mts.; (first collected by Menzies)."
 720. *Hedera platyphylla* (H. & A.) Gray [= *Cheirodendron platyphyllum* (H. & A.) Seem.], "Oahu, on the mountains behind

Honolulu at the elevation of 2,000 feet. Also gathered by Gaudichaud in the voyage of the *Bonite*."

724. *Reynoldsia Sandwicensis* Gray, "Oahu, in a ravine near Waianae" (Holotype: GH). Sherff (Bot. Leaflet 6: 10, 1952) selected this specimen as the lectotype, but this selection can be interpreted as indicating placement of the holotype.
726. *Gastonia Oahuensis* Gray [= *Tetraplasandra oahuensis* (Gray) Harms, in Engler & Prantl, Pflanzenfam. III, 8: 30, 1898], "Oahu, on mountains behind Honolulu, at the elevation of 2,000 feet; Hawaii, in the district of Puna," (Lectotype: US) designated by Sherff (Fieldiana Bot. 29(2): 66, 1955).
728. *Tetraplasandra Hawaiensis* Gray, "Hawaii, in the district of Puna" (Holotype: US), so indicated by Sherff (Fieldiana Bot. 29(2): 66, 1955).

Species Published by Gray in Proc. Amer. Acad. Arts 2: 159–160, 1852 (Gray, 1852a); 323–325 (Gray, 1852b).

COMPOSITAE

160. *Argyroxiphium macrocephalum* Gray, "Maui, at the base of high crater." It is present in US, but the best specimen is in GH, hence the latter is here chosen as the lectotype.
160. *Wilkesia Gymnoxiphium* Gray, "Kauai, in montibus" (Holotype: US). As to the validity of the genus *Wilkesia*, see St. John (Bishop Mus., Occas. Papers 24(8): 134–137, 1971).

VIOLACEAE

324. *Isodendrion pyriformis* Gray, "Oahu, Kaala Mountains" (Holotype: US), so indicated by St. John (Pacif. Sci. 6: 247, 1952).
324. *Isodendrion longifolium* Gray, "Kaala Mountains, Oahu, Sandwich Islands" (Holotype: US), designated by St. John (Pacif. Sci. 6: 236, 1952).
324. *Isodendrion laurifolium* Gray, "Oahu, Kaala Mountains" (Holotype: US), so indicated by St. John (Pacif. Sci. 6: 233, 1952.)

Species Published by Gray in Proc. Amer. Acad. Arts. 3: 48–54, 127–129, (1857) = 1853 (Gray, 1853)

RUTACEAE

50. *Pelea auriculaefolia* Gray [= *P. clusiaefolia* Gray ssp. *dumosa* (Rock) Stone var. *auriculaefolia* (Gray) Stone, Phanerog. Monogr. 3: 155, 1969], "Hawaii, Mouna Kea" (Holotype: US).
50. *Pelea oblongifolia* Gray, "Hawaii, Lua Pele Crater, Puna District, 800-1000 feet elevation" (Holotype: US), though Stone called it the lectotype (Phanerog. Monogr. 3: 81, 1969).
50. *Pelea Sandwicensis* (H. & A.) Gray [= *Brunellia Sandwicensis* H. & A.], "mountains, Lay & Collie" (Holotype: K).
50. *Pelea volcanica* Gray, "Sandwicensis" (Holotype: US), indicated by Stone (Phanerog. Monogr. 3: 85, 1969).

CUCURBITACEAE

54. *Sicyos macrophyllus* Gray, "Sandwich Islands" (Holotype: US).
54. *Sicyos cucumerinus* Gray, "Sandwich Islands, Hawaii" (Holotype: US). Gray also had two unnamed varieties.

ARALIACEAE

129. *Reynoldsia Sandwicensis* Gray, "Sandwich Islands" (Holotype: GH).
129. *Tetraplasandra Hawaiiensis* Gray, "Hawaii, Sandwich Islands" (Holotype: US).

Species Published by Gray in Proc. Amer. Acad. Arts 4: 33-50 (1860) = 1858; 306-318, (1860) = 1859 (Gray, 1858); 319-324 (Gray, 1859a); 326-327 (Gray, 1859b).

RUBIACEAE

36. *Bobea elatior* Gaud., "Oahu, Sandwich Islands."
36. *Bobea brevipes* Gray [= *B. elatior* Gaud. var. *brevipes* (Gray) Hbd., Fl. Haw. Is. 173, 1888], "Oahu, Sandwich Islands" (Holotype: US).
38. *Chomelia ? Sandwicensis* Gray [= *Bobea sandwicensis* (Gray) Hbd., Fl. Haw. Is. 174, 1888], "Oahu, Sandwich Islands" (Holotype: US).

43. *Straussia Kaduana* (C. & S.) Gray [= *Psychotria kaduana* (C. & S.) Fosb., Bishop Mus., Occas. Papers 23: 43, 1962; (*Coffea kaduana* C. & S.), "Oahu."
43. *Straussia Mariniana* (C. & S.) Gray [= *Psychotria Mariniana* (C. & S.) Fosb., Bishop Mus., Occas. Papers 23: 43, 265, 1962; *Coffea Mariniana* C. & S.], "Oahu."
43. *Straussia Hawaiensis* Gray [= *Psychotria hawaiiensis* (Gray) Fosb., as *P. hawaiiensis*, Bishop Mus., Occas. Papers 23: 43, 1962], "Sandwich Islands" (Holotype: US), so indicated by Sohmer (*Lyonia* 1: 176, 180, 1977).
48. *Coprosma rhynchocarpa* Gray, "Hawaii, Sandwich Islands," (Holotype: US), here indicated, "gathered also by Nelson, Macrae, and Gaudichaud." In Gray's manuscript (GH), it is stated "Puna and Waimea, and near the crater Lua Pele [= Kilauea]."
48. *Coprosma longifolia* Gray, "Sandwich Islands" (Holotype: US, sheet 42,341), so indicated by Oliver (Bishop Mus. Bull. 132: 177, 1935); "also gathered by Gaudichaud."
48. *Coprosma foliosa* Gray, "Sandwich Islands" (Holotype: US, sheet 42,340), so indicated by Oliver, (Bishop Mus. Bull. 132: 167, 1935); "where it was also gathered by Gaudichaud, Nuttall, and Seemann."
49. *Coprosma pubens* Gray, "Sandwich Islands" (Holotype: US), so indicated by Oliver (Bishop Mus. Bull. 132: 171, 1935). Gray in his manuscript (GH), stated the locality as: "Hawaii, forest and high bullock plains on Mouna Kea."
49. var. *Kauensis* Gray, "Sandwich Islands, Kauai" (Holotype: US, sheet 42,351). Gray in his manuscript (GH) stated: "mountains of Kauai."
49. *Coprosma Menziesii* Gray, "Hawaii" (Holotype: US, sheet 42,342), mentioned by Oliver (Bishop Mus. Bull. 132: 160, 1935). "Collected by Menzies, Macrae, Gaudichaud, and Douglas." Gray in his manuscript (GH) said, "Hawaii, Puna and Waimea." He also had two unnamed varieties.
49. *Coprosma ernodeoides* Gray, "Hawaii, Sandwich Islands" (Holotype: US, sheet 42,338), indicated by Oliver, (Bishop Mus. Bull. 132: 31, 1935). "Collected by Menzies, &c." Gray in his manuscript (GH) wrote: "Hawaii, lava plains and near Crater Lua Pele [= Kilauea]."

310. *Gouldia Sandwicensis* Gray, based on *Kadua affinis* C. & S. [= *Gouldia terminalis* (H. & A.) Hbd., var. *coriacea* (H. & A.) Fosb., Bishop Mus. Bull. 147: 47, 1937]. Gray also cited var. *terminalis* (H. & A.) Gray; and var. *hirtella* Gray, the latter without diagnosis.
317. *Kadua parvula* Gray [= *Hedyotis parvula* (Gray) Fosb., Bishop Mus. Bull. 174: 54, 1943], "Sandwich Islands, Oahu" (Holotype: US).
318. *Kadua petiolata* Gray, "Oahu, Sandwich Islands." According to Fosberg (Bishop Mus. Bull. 174: 73, 79, 81, 1943), the syntypes are in part *Hedyotis acuminata* (C. & S.) Steud., and in part its forma *Grayana* Fosb.
318. var. *ovalifolia* Gray [= *Hedyotis acuminata* (C. & S.) Steud., f. *ovalifolia* (Gray) Fosb., Bishop Mus. Bull. 174: 87, 1943], "Maui, Sandwich Islands" (Holotype: US).
318. *Kadua grandis* Gray [= *Hedyotis acuminata* (C. & S.) Steud., f. *grandis* (Gray) Fosb., Bishop Mus. Bull. 174: 90, 1943], "Oahu, Sandwich Islands, 1840" (Lectotype: US). The other collection, from Oahu, a syntype, is *H. acuminata* f. *alicarpa* Fosb.

LOGANIACEAE

322. *Labordea tinifolia* Gray, "Sandwich Islands, in Kauai, Maui, Oahu, Hawaii, and Maui. Coll. Expl. Exped., and coll. Remy" (GH), the latter the lectotype, chosen by Sherff (Field Mus. Nat. Hist, Bot. 17: 531, 1939).
323. *Labordea fagraeoidea* Gaud., "Hawaii."
323. *Labordea sessilis* Gray [= *Labordea fagraeoidea* Gaud., var. *sessilis* (Gray) Sherff, Amer. J. Bot. 25: 587, 1939], "Oahu, 1840" (Holotype: US).

SANTALACEAE

326. *Santalum Freycinetianum* Gaud., "Sandwich Islands, Oahu-Hawaii."
327. var. *latifolium* Wawra [= *Santalum haleakalae* Hbd.], "Maui and Hawaii." The Maui specimen needs investigation.
327. *Santalum ellipticum* Gaud. "Sandwich Islands."

327. *Santalum pyrularium* Gray, "Kauai, Sandwich Islands" (Holotype: GH), selected by Skottsberg, (Bishop Mus. Bull. 43: 48, 1927).

Species Published by Gray in the Proc. Amer. Acad. Arts 5: 114-146 (Gray, 1862a), 146-152 (Gray, 1862b).

COMPOSITAE

118. *Vittadinia humilis* Gray [= *Tetramolopium humile* (Gray) Hbd., Fl. Haw. Is. 198, 1888], "Sandwich Islands, on the mountains of Hawaii, and Maui." (Lectotype: US). Sherff (Bishop Mus. Bull. 135: 7, 1935) listed the type as, "on the mountains of Hawaii and Maui."
119. *Vittadinia tenerrima* (Less.) Gray [= *Tetramolopium tenerrimum* (Less.) Nees, Gen. Sp. Aster 202, 1833], "Oahu, Chamisso, Macrae."
119. *Vittadinia Remyi* Gray [= *Tetramolopium Remyi* (Gray) Hbd., Fl. Haw. Is. 197, 1888], "Maui, Remy 239" (Holotype: GH).
119. *Vittadinia Chamissonis* (Less.) Gray [= *Tetramolopium leptodotum* (Less.) Sherff, Bot. Gaz. 95: 500, 1934, Bishop Mus. Bull. 135: 14, 1935]. "Kaala Mountains of Oahu, U. S. Explor. Exped. 1840; 1816-17, A. von Chamisso" (Holotype: B).
119. var. ? *arbuscula* Gray [= *Tetramolopium arbusculum* (Gray) Sherff, Bot. Gaz. 95: 502, 1934; Bishop Mus. Bull. 135: 17, 1935], "Maui, 1840, in the great crater of the eastern part of Maui [= Haleakala]," (Holotype: US), "Sandwich Islands, on the mountains of Oahu, 1840".
120. *Vittadinia consanguinea* Gray [= *Tetramolopium consanguineum* (Gray) Hbd., Fl. Haw. Is. 199, 1888], "Sandwich Islands, on Hawaii and the mountains of Kauai", 1840, Kauai (Lectotype: US) selected by Sherff (Bishop Mus. Bull. 135: 19, 1935). He removed the Hawaii plant as var. *leptophyllum* Sherff (Bot. Gaz. 95: 502, 1934).
120. *Vittadinia arenaria* Gray [= *Tetramolopium arenarium* (Gray) Hbd., Fl. Haw. Is. 199, 1888], "Sandwich Islands, on the sand hills of Maui, in the district of Waimea, Hawaii, 1840."

- The Maui specimen (US) was chosen as lectotype by Sherff, (Bishop Mus. Bull. 135: 20, 1935).
120. *Vittadinia conyzoides* Gray [= *Tetramolopium conyzoides* (Gray) Hbd., Fl. Haw. Is. 200, 1888], "Sandwich Islands, on the sand hills of Maui" (Holotype: US).
125. *Coreopsis Mauiensis* Gray [= *Bidens mauiensis* (Gray) Sherff, Field Mus. Nat. Hist. Bot. 16: 157, 1937], "Sandwich Islands, Maui, on sandy or dry hills near the coast" (Holotype: GH).
126. *Coreopsis macrocarpa* Gray, [= *Bidens macrocarpa* (Gray) Sherff, Field Mus. Nat. Hist. Bot. 16: 105, 1937], "Sandwich Islands on the mountains of Oahu, U.S. Exploring Expedition" (Holotype: US).
126. *Coreopsis Macraei* Gray [= *Bidens Campylothea* Sch. Bip., Flora 39: 359, 1856], See Sherff (Field Mus. Nat. Hist. Bot. 16: 137, 1937), "Sandwich Islands, Macrae, Remy." Mt. Kaah [= *Mauna Kea*], June 1825, Macrae" (Holotype: G).
126. *Coreopsis cosmoides* Gray [= *Bidens cosmoides* (Gray) Sherff Bot. Gaz. 70: 98, 1920], "Hawaii, Sandwich Islands; also the coll. Remy 278." The expedition collection from Hawaii (US) is the holotype.
127. *Coreopsis Menziesii* Gray [= *Bidens Menziesii* (Gray) Sherff, Bot. Gaz. 70: 98, 1920], "Hawaii and Maui, Sandwich Islands." The Hawaii specimen was chosen by Sherff (Field Mus. Nat. Hist. Bot. 16: 15, 1937); (Lectotype: US).
127. *Coreopsis micrantha* (Gaud.) Gray [= *Bidens micrantha* Gaud., Bot. Voy. Uranie 464, 1829; Atlas pl. 85, 1826-30], (Holotype: P); "Sandwich Islands, especially Oahu." See Sherff, (Field Mus. Nat. Hist. Bot. 16: 145, 1937).
127. *Coreopsis Sandwicensis* (Less.) Gray [= *Bidens sandwicensis* Less., Linnaea 6: 508, 1831], "Sandwich Islands, Oahu." See Sherff (Field Mus. Nat. Hist. Bot. 16: 120, 1937).
128. *Bidens Hawaiensis* Gray, "Hawaii, Sandwich Islands, at various stations" (Holotype: US). See Sherff (Field Mus. Nat. Hist., Bot. 16: 94, 1937).
129. *Lipochaeta australis* Less. [= *L. lobata* (Gaud.) DC.], "Oahu, Sandwich Islands," See Sherff (Bishop Mus. Bull. 135: 48, 1935).
129. var. *connata* (Gaud.) Gray [= *Lipochaeta connata* (Gaud.) DC.], Iles Sandwich, Gaudichaud., (Holotype: P), "Maui." See Sherff (Bishop Mus. Bull. 135: 28, 1935).

129. var. *decurrens* Gray [= *L. succulenta* (H. & A.) DC., var. *decurrens* (Gray) Sherff], "Kauai" (Lectotype: US), chosen by Gardner, (*Rhodora* 83: 305, 1979).
129. var. *lobata* (Gaud.) Gray [= *Lipochaeta lobata* (Gaud.) DC., *Prodr.* 5: 611, 1836], in insulis Sandwicensibus, 1819, Gaudichaud (Isotype: G). "Sandwich Islands." See Sherff (*Bishop Mus. Bull.* 135: 49, 1935).
130. *Lipochaeta subcordata* Gray, "Hawaii, on the coast" (Holotype: US). See Sherff (*Bishop Mus. Bull.* 135: 34, 1935).
130. *Lipochaeta calycosa* Gray, "Oahu, Diamond Hill [= Diamond Head]," (Holotype: US), indicated by Sherff (*Bishop Mus. Bull.* 135: 51, 1935), though Gardner (*Rhodora* 81: 313, 1979) tried to choose it as in (GH).
130. *Lipochaeta lavarum* (Gaud.) DC., in insulis Sandwicensibus, (Holotype: P). Collected by the Wilkes Expedition, "Sandwich Islands, on West Maui, hills along sea coast." See Sherff (*Bishop Mus. Bull.* 135: 56, 1935).
130. *Lipochaeta integrifolia* (Nutt.) Gray, based on *Microchaeta integrifolia* Nutt., (*Am. Philos. Soc., Trans.* II, 7: 451, 1841), Oahu, Nuttall, (Holotype: BM), though Gardner (*Rhodora* 81: 333, 1979) considered the type to be Atooi [= Kauai], T. Nuttall (BM). "Oahu and Maui." Found on all the major islands.
130. *Lipochaeta succulenta* (H. & A.) DC., based on *Verbesina succulenta* H. & A., *Bot. Beechey Voy.* 87, 1832, Oneeheow [= Niihau], Lay & Collie (Holotype: K), "Oahu."
131. *Lipochaeta heterophylla* Gray, "Maui" 1840, (US), (Holotype: US). Known from Molokai, Maui, and Hawaii. See Gardner (*Rhodora* 81: 310, 1979).
131. *Lipochaeta tenuifolia* Gray, "Oahu" (Lectotype: US), effectively chosen by Sherff (*Bishop Mus. Bull.* 135: 80, 1935), though he did not use the word lectotype. Gardner chose the same specimen, and called it a lectotype (*Rhodora* 81: 318, 1979).
131. *Lipochaeta micrantha* (Nutt.) Gray "Kauai, in mountains, Koloa" 1840, (US). Based on *Schizophyllum micranthum* Nutt., (*Am. Philos. Soc., Trans.* II, 7: 453, 1841), "Atooi [= Kauai], in shady woods near Koloa [= Koloa]" (Holotype: BM).

131. *Lipochaeta Remyi* Gray, "Oahu, 1851-55, Remy 260," (Holotype: GH), indicated by Sherff (Bishop Mus. Bull. 135: 81, 1935).
132. *Raillardia latifolia* Gray, "Island of Kauai," (Holotype: US), indicated by Sherff (Bishop Mus., Bull. 135: 111, 1935). The generic name has been corrected to *Railliardia*.
132. *Raillardia scabra* DC. "Hawaii and Maui," (US).
132. var. *hispidula* Gray, "Hawaii and Maui," (Syntype: US). This was discussed by Sherff, and reduced to *R. scabra* (Bishop Mus. Bull. 135: 114, 1935).
132. var. *leiophylla* Gray, "Hawaii and Maui." The specimen was evidently from Maui, and is here chosen as lectotype (US).
133. *Raillardia laxiflora* DC., "Hawaii," [= *R. ciliolata* DC., var. *laxiflora* (DC.) Sherff, Am. Journ. Bot. 20: 619, 1933]. The holotype is Hawaii, Macrae (CGE).
133. *Raillardia ciliolata* DC., "Hawaii." The holotype is "Hawaii," on volcano, 1825, Macrae (CGE). See Sherff (Bish. Mus. Bull. 135: 115, 1935).
133. *Raillardia linearis* Gaud., "Oahu, Hawaii, and Maui." The holotype is "Iles Sandwich, Gaudichaud" (P).
133. *Raillardia Menziesii* Gray, "Hawaii and Maui." The specimen "on mountain of eastern Maui, 1840", (US) was chosen as lectotype by Sherff (Bishop Mus. Bull. 135: 131, 1935).
134. *Raillardia playtyphylla* Gray, "on banks of crater, eastern Maui," 1840 (Lectotype: US) chosen by Sherff (Bishop Mus., Bull. 135: 135, 1935).
134. *Raillardia arborea* Gray, "Hawaii, on Mouna Kea" (Holotype: US).
134. *Raillardia struthioloides* Gray, "Hawaii, on Mouna Kea" (Holotype: US).
134. *Dubautia plantaginea* Gaud., var. *plantaginea*, "Oahu and Hawaii." "Iles Sandwich, Gaudichaud" (Holotype: P). The species is widely distributed and common in the mountains of Oahu. Gaudichaud's illustration showed the leaves somewhat broader than usual, and with some alternate branches in the panicle. Since he noted only two such collections, from Lanai, Sherff (Bishop Mus. Bull. 135: 85, 1935), assumed that Gaudichaud's type must have come from

Lanai, and that the var. *plantaginea* was restricted to Lanai. However, Gaudichaud did not visit Lanai, and the characters of the branching of the inflorescence stressed by Sherff seem insignificant. Hence, *P. plantaginea* is again maintained for the Oahu species, and var. *Chamissonis* Sherff (Am. Journ. Bot. 20: 610, 1933) becomes a synonym of the species.

135. *Dubautia laevigata* Gray, "Kauai, Sandwich Islands" (Holotype: US). It was so indicated by Sherff (Bishop Mus. Bull. 135: 94, 1935).
135. *Dubautia laxa* H. & A., "Oahu, Capt. Beechey's Expedition", (Holotype: K). Also, "Oahu, U.S. Exploring Expedition."
135. *Dubautia paleata* Gray, "Kauai, mountains," (Holotype: US). It was so listed by Sherff (Bishop Mus. Bull. 135: 105, 1935).
136. *Wilkesia gymnoxiphium* Gray, "Kauai, Sandwich Islands, alt. 3,700 feet" (Holotype: US). Synonym is *Argyroxiphium gymnoxiphium* (Gray) Keck [Bishop Mus. Occas. Papers 11(19): 23, 1936]. See St. John [Bishop Mus. Occas. Papers 24(8): 128-137, 1971].
136. *Argyroxiphium sandwicense* DC., "Hawaii, 6,300-12,000 feet" (Holotype: US).
136. *Argyroxiphium macrocephalum* Gray [= *A. sandwicense* DC], "Maui, above 9,000 feet," (Holotype: US), listed by Keck [Bishop Mus. Occas. Papers 11(19): 17, 1936].
137. *Artemisia australis* Less., var. *Eschscholtziana* (Besser?) Gray, Oahu and Kauai. "Wahu [= Oahu], Eschscholtz," (Holotype: L).
137. var. *Mauiensis* Gray, "Crater of Maui," [= Haleakala] [= *A. mauiensis* (Gray) Skotts. (Bishop Mus. Bull. 43: 15, 1927)] (Holotype: US). Skottsberg also published regarding the typification of this plant (Bishop Mus. Bull. 43: 15, 1927), but he indicated the type as in both (US, and GH). To clarify this point, it is here stated as (Holotype: US).

LOBELIACEAE

147. *Delissea coriacea* Gray [= *Cyanea coriacea* (Gray) Hbd., Fl. Haw. Is. 254, 1888], "Kauai, Remy" (= no. 302) (Holotype: GH). There is also an unnamed variety.

148. *Delissea obtusa* Gray [= *Cyanea obtusa* (Gray) Hbd., Fl. Haw. Is. 254, 1888], "mountains of Maui" (Holotype: US).
148. var. ? *mollis* Gray, "Mouna Kea, Hawaii" (Holotype: US). Rock reduced this variety to the synonymy of the species, based only upon its diagnosis, without having seen the holotype, [Bishop Mus. Mem. 7(2): 203, 1919].
148. *Delissea* ? *platyphylla* Gray [= *Cyanea platyphylla* (Gray) Hbd., Fl. Haw. Is. 264, 1888]. "district of Puna, Hawaii" (Holotype: US).
148. *Cyanea Grimesiana* Gaud., var. ? *citrullifolia* Gray, "Mouna Roa and Mouna Kea, Hawaii." Rock [Bishop Mus. Mem. 7(2): 251, 1919] considered this a juvenile form of *C. tritomantha* Gray.
148. *Cyanea aspera* Gray, "Oahu" (Holotype: US). Rock, [Bishop Mus. Mem. 7(2): 381, 1919] made this a synonym of *Rollandia calycina* (Cham.) G. Don.
149. *Cyanea pilosa* "Mouna Kea, Hawaii" (Holotype: GH). In Gray's manuscript (GH) he recorded the data, windward side of Mouna Kea at lower edge of forest.
149. *Cyanea* ? *Rollandia* Gray, "Oahu" (Holotype: US). According to Rock [Bishop Mus. Mem. 7(2): 377, 1919], this is a synonym of *Rollandia crispa* Gaud. (Voy. Uranie, Bot. 459, 1829).
149. *Cyanea tritomantha* Gray, "Mouna Kea, Hawaii" (Holotype: GH). In Gray's manuscript (GH) he stated "windward side of Mouna Kea, at 3,000 feet."
149. *Cyanea superba* (Cham.) Gray, "Oahu" based on *Lobelia superba* Cham. (Linnaea 8: 223, 1833). The holotype was in (B).
149. *Cyanea leptostegia* Gray, "Upper edge of the forest near the tabular summit of Kauai" (Holotype: US).
150. *Clermontia grandiflora* Gaud.,
150. var. *brevifolia* Gray [= *Clermontia grandiflora* Gaud.]. fide Rock, [Bishop Mus. Mem. 7(2): 327, 1919]. Sandwicensis, Gaudichaud (Holotype: P).
150. var. *oblongifolia* (Gaud.) Gray [= *Clermontia oblongifolia* Gaud.], fide Rock, [Bishop Mus. Mem. 7(2): 315, 1919]. Sandwicensis, Gaudichaud (Holotype: P.)
150. var. *longifolia* Gray [= *Clermontia Kakeana* Meyen], fide Rock, [Bishop Mus. Mem. 7(2): 308, 1919].

150. *Clermontia parviflora* Gaud., ex Gray "Hawaii (and Oahu?), first collected by Macrae." Hawaii, Gaudichaud (Holotype: P). 1825, Macrae (GH). The Oahu specimen is dubious.
150. *Lobelia macrostachys* H. & A. [= *Trematolobelia macrostachys* (H. & A.) Zahlbr.], "Oahu and Hawaii."
150. *Lobelia Gaudichaudii* A. P. DC., var. *Kauaensis* Gray, "Kauai" (Holotype: US). Maintained by St. John, [Bishop Mus. Occas. Papers 14(8): 120, 1938]. Synonyms are *Lobelia kauaensis* (Gray) Heller, and *Galeatella kauaensis* (Gray) Deg. & Deg.
150. *Lobelia neriifolia* Gray (*non* Morris, 1835), [= *Lobelia Grayana* E. Wimm., Naturhist. Staatsmus, Wien, Ann. 56: 317-374, 1948], "East Maui, U.S. Exploring Expedition" (Holotype: US), indicated by E. Wimm. [Engler, Pflanzenreich IV, 276b, (107): 687, 1953].

GOODENIACEAE

151. *Scaevola coriacea* Nutt. ex Gray, "Sandwich Islands"; it was collected on Kauai (Holotype: GH), and Maui on sand hills. There are also two unnamed varieties.
151. *Scaevola Gaudichaudi* H. & A., Hawaiian Islands.
152. *Scaevola Chamissoniana* Gaud.
152. *Scaevola mollis* H. & A.
152. *Scaevola glabra* H. & A.

Species published by Gray in Proc. Amer. Acad. Arts 5: 321-352, (1861) = 1862 (Gray, 1862c)

ERICACEAE

323. *Vaccinium reticulatum* Sm., "Hawaii, Mouna Loa, 1840" (GH).
323. var. *calycinum* (Sm.) Gray, [= *Vaccinium calycinum* Sm.], "Hawaiian Islands," (US). See Skottsberg (Bishop Mus. Bull. 43: 70, 1927).
323. var. *dentatum* (Sm.) Gray, "Sandwich Islands" (US). [= *Vaccinium dentatum* Sm.]. See Skottsberg (Bishop Mus. Bull. 43: 74, 1927).

323. var. ? *lanceolatum* Gray [= *Vaccinium dentatum* Sm., var. *lanceolatum* (Gray) Skottsberg, Horti Gotoburg, Acta 2: 253, 1926.]. "Kauai, tabular summit" (Holotype: US).
323. *Vaccinium penduliflorum* Gaud. [= *Vaccinium dentatum* Sm., fide Skottsberg, Bishop Mus. Bull. 43: 74, 1927]. "Sandwich Islands."
323. var. *berberifolium* Gray, "East Maui, on Mouna Haleakala" (Holotype: US), "and apparently on the mountains of Oahu" [= *Vaccinium berberifolium* (Gray) Skottsberg., (as *berberidifolium*), Bishop Mus. Bull. 43: 79, 1927].

EPACRIDACEAE

325. *Cyathodes Tameiameiae* Cham. [= *Styphelia Tameiameiae* (Cham.) F. Muell.], "Oahu &c."
325. var. *Chamissoi* Gray, = the above species.
325. var. *Brownii* Gray [= *Styphelia Tameiameiae* (Cham.) F. Muell., var. *Brownii* (Gray) St. John, Bishop Mus. Occas. Papers 17(7): 84, 1942], "Maui, Kauai, and especially Hawaii." Hawaii, Macrae (Lectotype: GH), here selected.
325. *Cyathodes Douglasii* Gray [= *Styphelia Douglasii* (Gray) F. Muell. ex Skottsberg.] "Hawaii, on Mouna Loa, Mouna Kea; also Maui, on Mouna Haleakala." Mauna Kea, Douglas (GH) was made the lectotype by Sleumer, (*Blumea* 12: 157, 1963).
325. var. *struthioides* Gray [= *Styphelia Douglasii* (Gray) F. Muell. ex Skottsberg.] "Mouna Kea, Hawaii, high in the pastoral region" (Holotype: US). Gray also doubtfully included a plant from Kauai, and perhaps a form on the mountains of Kauai, without flowers or fruit.

EBENACEAE

327. *Maba Sandwicensis* A. DC, [= *Diospyros ferrea* (Willd.) Bakh., ssp. *sandwicensis* (A. DC.) Bakh., Buitenzorg Jard. Bot. Bull. III, 15: 58, 64, 1937]. "Oahu and Hawaii."

SAPOTACEAE

328. *Sapota Sandwicensis* Gray [= *Planchonella sandwicensis* (Gray) Pierre, Not. Bot. Sapot. 36, 1890]. "Oahu, where it

was also collected by Remy (no. 478) in fruit" (Holotype: GH), and so listed by Lam (*Blumea* 5: 24, 1942).

PRIMULACEAE

328. *Lysimachia Hillebrandi* Hook. f. ex Gray, "Oahu and Maui," "Oahu, Kalihi, Hillebrand 183" (Lectotype: K).
 328. var. *daphnoides* Gray [= *Lysimachia daphnoides* (Gray) Hbd., *Fl. Haw. Is.* 285, 1888]. "Kauai" (Holotype: US).
 328. var. *angustifolia* Gray, "Maui, Waiehu, Remy, 1851-55 (Holotype: GH).
 328. *Lysimachia lineariloba* H. & A. [= *Lysimachia mauritiana* Lam.], "Sandwich Islands."

OLEACEAE

331. *Olea Sandwicensis* Gray [= *Osmanthus sandwicensis* (Gray) Knobl., *Bot. Centralbl.* 61: 82, 1895.], "Oahu" (Holotype: US), "also in Remy's collection from Kauai (no. 479), and a narrow-leaved form, with immature fruit similar to the common olive from Molokai, (no. 482)."

APOCYNACEAE

333. *Ochrosia Sandwicensis* sensu Gray non A. DC. [= *Ochrosia Holei* St. John, *Adansonia* II, 18: 208, 1978], "Oahu, Remy 366, 367" (Syntypes: GH). The Remy collections are *Rauvolfia Sandwicensis* A. DC. See St. John, *Adansonia* II, 18: 208, 1978.

HYDROPHYLLACEAE

338. *Nama Sandwicensis* Gray, "Oahu, Macrae, Nuttall, Remy no. 425, Kauai, Nuttall, sand hills of Maui, Dr. Pickering and Mr. Breckenridge [= Brackenridge]" Oahu, Mann and Brigham 97 (Lectotype: GH).

BORANGINACEAE

339. *Heliotropium anomalum* H. & A., "Coral Islands, and Sandwich Islands."
 339. var. *argenteum* Gray, "Sandwich Islands" (Holotype: US).

LABIATAE

341. *Sphacele hastata* Gray [= *Lepechinia hastata* (Gray) Epling, Torrey Bot. Club Bull. 67: 511, 1940], "Mouna Haleakala, East Maui, 5,000–7,000 feet" (Holotype: US).
343. *Phyllostegia brevidens* Gray, "Hawaii, in the forest of Mouna Kea, 3,000 feet" (Holotype: US), so indicated by Sherff (Bishop Mus. Bull. 136: 23, 1935).
343. var. *ambigua* Gray, "West Maui," 1840 (Holotype: US), See Sherff (Bishop Mus. Bull. 136: 23, 1935).
344. *Phyllostegia parviflora* (Gaud.) Benth., var. *glabriuscula* Gray, "Hawaii, Mount Kaah [= Mauna Kea], Macrae (Holotype: GH), so listed by Sherff (Bishop Mus. Bull. 136: 37, 1935).
344. var. *Mollis* (Benth.) Gray [= *Phyllostegia mollis* Benth., Linnaea 6: 79, 1831], Oahu, Chamisso (Holotype: L), so listed by Sherff (Bishop Mus. Bull. 136: 40, 1935.)
344. *Phyllostegia stachyoides* Gray, "Hawaii, in the district of Waimea" 1840 (Holotype: US), and so listed by Sherff (Bishop Mus. Bull. 136: 29, 1935).
344. *Phyllostegia clavata* Benth., Owhyhee [= Hawaii], monte ignovomo, Macrae (Holotype: K), and so listed by Sherff (Bishop Mus. Bull. 136: 19, 1935).
344. *Phyllostegia racemosa* Benth., Hawaii, montem Kaah [= Mauna Kea], Macrae (Holotype: K), and so indicated by Sherff (Bishop Mus. Bull. 136: 49, 1935).
345. *Phyllostegia haplostachya* Gray [= *Haplostachys haplostachya* (Gray) St. John, Pacif. Trop. Bot. Gard. Mem. 1: 292, 1973], "Maui, on the sands of the low isthmus" (Holotype: US), and so listed by Sherff (Bishop Mus. Bull. 136: 6, 1935). "Also gathered by Remy on Hawaii." Another synonym is *Haplostachys Grayana* Hbd. (Fl. Haw. Is. 346, 1888).
345. var. *leptostachya* Gray [= *Haplostachys leptostachya* (Gray) St. John var. *leptostachya* (Gray) St. John, Pacif. Trop. Bot. Gard. Mem. 1: 292, 1973]. "On barren ridges of Kauai," 1840 (Holotype: US).
345. *Phyllostegia truncata* Gray [= *Haplostachys truncata* (Gray) Hbd., Fl. Haw. Is. 347, 1888], "Maui, Remy no. 395" (Holotype: GH). See Sherff (Bishop Mus. Bull. 136: 10, 1935).

345. *Phyllostegia florubunda* Benth., "Hawaii (as O-why-hee) D. Nelson" (Holotype: BM). See St. John (Pacif. Sci. 30: 33, 1973), "Hawaii, in the woods of the district of Puna."
347. *Stenogyne rotundifolia* Gray, "Mouna Haleakala, East Maui" 1840 (Holotype: US), and so listed by Sherff (Bishop Mus. Bull. 136: 93, 1935).
347. *Stenogyne calaminthoides* Gray, "Hawaii, in the forests of Mouna Kea" (Holotype: US), listed by Sherff (Bishop Mus. Bull. 136: 62, 1935).
348. *Stenogyne angustifolia* Gray, "Hawaii, in the district of Waimea" (Holotype: US), and so listed by Sherff (Bishop Mus. Bull. 136: 69, 1935).
348. *Stenogyne crenata* Gray, "Maui, on Mouna Haleakala" (Holotype: US), and so recorded by Sherff (Bishop Mus. Bull. 136: 99, 1935).
348. *Stenogyne diffusa* Gray, "Hawaii, in the forests of the district of Waimea" (Holotype: US), listed by Sherff, (Bishop Mus. Bull. 136: 98, 1935).

GESNERIACEAE

350. *Cyrtandra cordifolia* Gaud., "Oahu."
350. *Cyrtandra platyphylla* Gray, "Hawaii, in forests" (US, GH). In Gray's manuscript (GH), he recorded it as Hawaii, in wood between Puna and Pahuhali. Since Rock in his monograph (Amer. J. Bot. 5: 269, 271, 1918) twice listed the U.S. Exploring Expedition specimen as in the Gray Herbarium, we follow that choice, and make the same choice: (Holotype: GH).
350. *Cyrtandra Pickeringii* Gray, "Oahu, mountains" (Holotype: US). See St. John, (Bishop Mus. Bull. 229: 272-278, figs. 110, 11, 1966). It is known only from the type collection, and is now evidently extinct.
351. *Cyrtandra triflora* Gaud., in insulis Sandwicensibus, alt. 100-300 hex. (Holotype: P). See St. John, (Bishop Mus. Bull. 229: 86-92, figs. 26-28, 1966). It is known only from the type collection, and is considered extinct.
352. var. *Gaudichaudi* Gray, "Oahu, Hawaii." This equals the species.
352. var. *arguta* Gray, "Oahu, gathered by Macrae, Gaudichaud, voyage of La Bonite; U.S. Exploring Expedition, Brack-

enridge; at Woahoo [= Oahu], Maio, 1825, Macrae." See St. John (Bishop Mus. Bull. 229: 118-124, figs. 41-44, 1966). "Hawaii in mountain forest, U.S. Exploring Expedition" (Holotype: US).

Species Published by Gray in Proc. Amer. Acad. Arts 6: 37-55, (1866) = 1862 (Gray, 1862d).

GENTIANACEAE

41. *Erythraea sebaeoides* (Griseb.) Gray [= *Centaurium sebaeoides* (Griseb.) Druce, Bot. Exch. Club Brit. Is., Rept. 1916: 614, 1917.], (*Schenkia sebaeoides* Griseb.), "Oahu."

SOLANACEAE

42. *Solanum Nelsoni* Dunal in A. DC., "Hawaii; in the sands of the low isthmus of Maui. Collected by Nuttall on Kauai, and on Oahu by Remy no. 442."
43. *Solanum Sandwicense* H. & A., "Oahu."
43. var. *Kauaiense* Gray [= *Solanum Kauaiense* (Gray) Hbd., Fl. Haw. Is. 305, 1888.], "Kauai, leeward verge of the tabular summit" (Holotype: US).
43. *Solanum incompletum* Dunal, "Hawaii, D. Nelson" (Holotype: BM).
44. *Lycium Sandwicense* Gray, "on Diamond Hill, near Honolulu" (Holotype: US).
48. *Nothocestrum latifolium* Gray, "Oahu, on the ridge of the Kaala Mountains" (Holotype: US).
48. *Nothocestrum longifolium* Gray, "Oahu, mountains behind Honolulu, at the elevation of 1,500 feet" (Holotype: US).
49. *Nothocestrum breviflorum* Gray, "Hawaii, between the Great Crater and the upper base of Mouna Roa." (Holotype: US).

MYOPORACEAE

52. *Myoporum Sandwicense* Gray, "Sandwich Islands, leg. Menzies, Beechey, Gaudichaud, Douglas, Nuttall, (Remy nos. 461, 462, 463, &c. on almost all the islands." Oahu, Remy 462 (Lectotype: GH), chosen by Webster (Pacif. Sci. 5: 61, 1951). Sandwich Islands, U.S. Exploring Expedition (US).

PLANTAGINACEAE

54. *Plantago princeps* C. & S., Sandwich Islands.
var. *laxifolia* Gray, "Hawaii, growing among stones by the sea-side, at the northern base of Mouna Kea" (Holotype: US).
54. var. *hirtella* Gray, "On the tabular summit of Kauai" (Holotype: US).
54. *Plantago pachyphylla* Gray, "Sandwich Islands" (Holotype: US). This species is native to East Maui.
54. var. *Maviensis* Gray, "Maui, Mouna Haleakala, at 7,500 feet altitude" (Holotype: GH).
54. var. *Hawaiensis* Gray [= *Plantago hawaiensis* (Gray) Pilger, Fedde Repert. 19: 116, 1923], "Hawaii, on Mouna Kea and Mouna Loa, to the elevation of 6,000 feet to 8,000 feet, and in the environs of the Great Crater," the latter (Lectotype: US).
54. subvar. *gracilis* Gray [= *Plantago hawaiensis* (Gray) Pilger], "Hawaii, Remy 429" (Holotype: GH).
54. var. *Kavaiensis* Gray [= *Plantago Grayana* Pilger, Fedde Repert. 19, 115, 1923], "Kauai, on the tabular summit" (Holotype: GH).

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